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ABSTRACT

This combination report/guide summarizes practical "how-to" information on the development and operation of national training boards that was gathered in a series of case studies of the effectiveness of national training boards in Canada, Singapore, Sweden, and the United Kingdom and in studies of training boards in Australia, Brazil, Colombia, Germany, and South Africa. The introductory chapter describes the research on which the guide is based, discusses common themes affecting the quality of training in the countries studied, and examines the rationale for training programs. Chapter 2 summarizes the subsequent discussion of the effectiveness of national training boards in the form of a checklist and guidelines for use by countries considering establishing a national training board. Chapters 3-9 synthesize research findings into practical recommendations dealing with the following aspects of initiating and operating national training boards: enabling legislation, training board composition, training board structure, financial resources, delivery of training, institutional planning and operations, and testing and certification. Chapters 10 and 11, which are more analytical than the chapters preceding them, examine the perception and images of national training boards and lessons learned from the case studies. Contains 59 references. (MN)

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TRAINING discussion PAPERS

The effectiveness of national training boards

by David N. Wilson

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Training Policies Branch
International Labour Office Geneva

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I. Introduction

The dearth of pertinent literature on the co-ordination of vocational training and the effectiveness of national training boards suggested undertaking case studies of effective entities in several nations to obtain relevant information. Case studies were prepared on Canada, Singapore, Sweden and the United Kingdom and information collected on Australia, Brazil, Colombia, Germany and South Africa. This paper presents a comparative view of the similarities and differences which have contributed to successful models in some nations and to practical failures in others. The issues involved in establishing an effective vocational training coordination body at the national level are presented and analysed. A "how-to" approach presents practical advice and guidelines for those nations interested in establishing National Training Boards or modifying existing bodies.

The impact of technological innovations upon the nature of work, international competitiveness and survival in the world economic system has re-focused the attention of policy-makers upon two major inputs: labour and capital. The "traditional" nature of capital has expanded to include recent innovations, such as robotics, automatic process control, new information technologies and computer-assisted design and manufacturing. In turn, these technological innovations have affected the quality of labour by "bidding-up" entry qualifications to the labour market; especially education and training inputs.

Moreover, the shift from resource-based economies to service and informatics-based societies has intensified both capital and labour inputs. A "horse and buggy" education is anachronistic in a high-technology workplace environment which demands informed employees. Nations with an under-skilled work force are increasingly incapable of competing with those nations which have invested in the knowledge and skills of their employees. Actual and functional illiteracy and in-numeracy can no longer be tolerated for reasons of both productivity/competitiveness and safety. This was poignantly illustrated by the death of a Japanese labourer, who unknowingly strayed into the programmed path of an industrial robot. Employees must be able to learn - during their entire lifetimes - in order to adapt to the changing world of work. This will require skill upgrading, the acquisition of new skills, and broadening the range of employees' existing skills.

The piece-meal planning and co-ordination of economies and education/ training systems must give way to shared responsibility for matching workers' skill levels with the requirements of the productive, service and informatics sectors. Integrated planning requires the participation of all involved bodies: governments, employers, educators and employees. One effective mechanism to achieve such participation has been through the establishment of effective Training Boards at national, state/provincial and local levels, or alternatively at the horizontal level for entire industrial sectors.

A. Background: Education and training

A survey of relevant literature indicates several common themes which intersect and impact upon the quality of training. While a significant degree of contention exists, there are common areas of agreement and areas where consensus is found.

The field of Economics of Education has endeavoured, since 1962, to "prove" that investment in education and training should be considered in parallel with the "traditional"

economic inputs of land and capital. Nearly thirty years of studies have provided sufficient "hard" evidence upon which to base planned investment in education and training. While the importance of "rate-of-return" studies to decide between alternative investments in education and training is contentious, their findings cannot be ignored by planners and policy-makers.

The cost-effectiveness of education and training is equally difficult to "measure," since many factors are difficult to isolate and control. However, most writers are in agreement that the impact of technological innovations upon the industrial and service sectors will be directly affected by the ability of workers to understand and utilise the new technologies. This means that continuing investment in education and training - including re-training of redundant workers - will become increasingly necessary.

Human Resource Development (HRD) - formerly referred to as "manpower" planning - is undertaken by most countries, although widespread variations are evident. These variations are, mainly, in whether HRD is planned at the central government level, at state/provincial levels, at local/municipal levels, or at the individual enterprise level, i.e., at macro or micro levels.

The focus of HRD differs from country to country with emphasis upon secondary school pre-occupational training predominant in most countries, with occupation-specific training provided by employers. In marked contrast, Canada and the U.S.A. focus upon post-secondary occupational training in community and technical colleges, both public and private. Yet another "model" is Japan, where large private-sector firms provide most of the post-secondary occupational training.In a mere 25 years, Singapore has achieved modernisation and sustained economic growth through the planned development of its human resources.

The German and Japanese philosophy that all youth should be provided with initial occupational training, regardless of whether it is appropriate for available jobs, appears to be gaining favour with many other developed, and some developing, nations. The rationale for this policy is: (a) employees who have acquired a "solid" initial training are more easily re-trained than those without initial training, and (b) initial training is not merely technical in nature, but also attitudinal.

Technological change and the concomitant shift from the productive to the service and informatics sectors imply that retraining of employees will become an increasingly important feature of competitive economic systems. Success in initial education and training, therefore, is viewed as the "key" to the successful retraining of the workforce. The Canadian Labour Market Productivity Centre, whose report was instrumental in the creation of the new Canadian Labour Force Development Board, noted that "technological advances are significantly altering economic activity" and "raising skills requirements." Consequently, "workers already in the workforce will need to be retrained regularly." "The effective application of new forms of technology will be the single most important source of job creation, wealth, and value-added in the years ahead." In the next decade, it was noted that "almost half the new jobs will require more than five years of combined education and training beyond the completion of high school. They concluded that "Canada's ability to compete in a knowledge-based, technology-driven world will increasingly depend on its success in training and retraining workers."

B. Dimensions of the problem: Why are training boards necessary?

In most countries, the "market" for training does not work well, according to Adams. Some employers display greater expediency than foresight. They prefer to "poach" already-trained employees from other enterprises, rather than invest in training. Moreover, countries such as Canada have consistently relied upon immigration for their skilled employees and now face the twin spectre of fewer skilled immigrants and an aging workforce, often with skills which are no longer

appropriate. Failure to invest in the training of replacements and the retraining of displaced employees now approaches crisis proportions. Thus, both at the level of the individual enterprise and at national levels, what Streeck has called "free riders" have come to rely upon the training efforts of others, rather than invest in training. Such entities have failed to create a "training culture," in which training is perceived as an integral part of sound economic behaviour. For example, The Federation of German Trade Unions believes that training should be considered a "social duty" by all employers.

In such cases of market failure, governments often undertake provision of training (and retraining). Yet, employers and labour unions then criticise training provided in institutions controlled exclusively by governments. These criticisms include: (a) this training tends to be more theoretical than practical, since trainers do not have direct continuing experience with business/industry; (b) training provided by governments is usually very expensive; and (c) once established, government-provided institutional training tends to continue, regardless of whether the need still exists.

Many countries have experimented with several systems to support and deliver training, often flipping fromone extreme to another. Other countries have benefitted from long-term stability without marked changes upsetting their progress. In most countries, training is delivered by a wide variety of different institutions operating in parallel with little co-ordination. This multiplicity of training providers tends to increase in complexity, very often competing with one another. In other countries, co-ordinating and controlling mechanisms may be situated at governmental levels which exacerbate problems of communication and co-ordination.

One example of shifts from one extreme to another is the United Kingdom which has experienced three phases since the 1964 Industrial Training Act. First, a levy-grant system supported Industrial Training Boards (ITBs) in up to 27 industrial sectors. Rainbird notes that this "was the most effective incentive mechanism for both increasing the volume and improving the quality of training." Then, the 1973 Employment and Training Act introduced central co-ordination and planning of national labour force policy to correct some of the shortcomings of the 1964 Act. Rainbird notes that the introduction of state funding for the ITBs made them dependent on the exigencies of government, vulnerable to policy changes, and subordinated industrial requirements to those of central government. The Manpower Services Commission (MSC) was created to co-ordinate the work of the ITBs and funding was changed from the levy-grant system to a bureaucratic levy-exemption system. While the government was initially prepared to subsidise shortfalls in training costs, subsequent policy changes devolved training policy to voluntary efforts by employers and/or employer organisations. Although the Conservative government would have liked to reduce funding levels, the riots of 1981 and high levels of youth unemployment made it politically expedient to launch the Youth Training Scheme in 1983 as a one-year scheme, which was later extended to two years in 1985-86. Finally, in 1988 the United Kingdom wound up and privatised all but one of the remaining ITBs and shifted responsibility for training to the employer-dominated Training and Enterprise Councils (TECs), or Local Enterprise Councils (LECs) in Scotland, established in 1990.

Rather than leaping from crisis to crisis, Rainbird noted that the most important lesson from the British experience is that "the key objective of training policy must be to create mechanisms which encourage the establishment of a long-term approach to planning and development, underpinned by institutional stability."

In marked contrast, the Brazilian SENAI (National Service for Industrial Apprenticeship) has operated since 1942 under the aegis of The Federation of Brazilian Industries. SENAI benefits from an industrial levy comprising a tax of one percent on industrial payrolls to finance its training activities. Train-

ing is delivered both in pre-service SENAI schools to 14-18 year old apprentices and to [redacted] requiring upgrading and/or retraining in industries.

The SENAI "model" was replicated for the Brazilian commercial/service sectors with the creation of SENAC (National Service for Commercial Training) in 1946 and SENAR (National Rural Vocational Training) in 1976. In addition, the SENAI model has been successfully transferred to 19 other Latin American and two Caribbean nations. However, these replications are under the aegis of either ministries of labour or education, rather than private and loosely linked to the Ministry of Labour, like SENAI. In each replication of the "model," significant adaptations have been made to local conditions. For example, SENA (National Apprenticeship Service) in Colombia is involved in large-scale rural community development, in addition to the delivery of industrial training. Wilson has noted that it is likely that SENAR in Brazil constitutes a reverse transfer from SENA in Colombia. Similarly, Wilson noted that INA (National Apprenticeship Institute) in Costa Rica modified the SENAI model to suit small enterprise training, which possibly contributed to the origins of the ILO Modules of Employable Skill (MES) system.

It should be recognised that even the "stable," long-standing training board systems, are not static; rather they have evolved changes to adapt to changing economic, social and political conditions. A comparable situation to the U.K. took place in Chile, where the INACAP system was privatised. Castro and Bas noted that this privatisation resulted in the marked shift of INACAP clientele from the urban poor to the children of the middle class.

The experience of Sweden is also relevant to an understanding of how long-established systems adapt to changes in economic conditions. In 1944 a National Board for Vocational Schools was established through co-operation of government with The Swedish Employers' Confederation (SAF) and the Swedish Trade Union Confederation (LO). The reform of Upper Secondary Schools in 1970 integrated vocational and academic subjects under the National Board of Education (NBE). Under the NBE, a system of 24 County Education Committees was responsible for technical and academic education. In 1991, the National Board of Education was abolished and replaced by a smaller National Agency for Education. The County Education Committees have been replaced by decentralised Municipal Education Authorities, responsible for the planning and execution of education and training. The state subsidy to education is to be given to the municipalities as a lump sum, based upon the number of students. This means that a long-established, centralised, hierarchical system has been decentralised to the local government level.

This structure for the delivery of school-based vocational training is paralleled by the National Employment Training Board structure, which is responsible for training within industries and enterprises. According to Granander, the National Employment Training Board provides training to "immigrants, returnees to the labour market ... job-less due to closures, and people forced to change occupation due to illness or injury." Prior to 1986, labour market training was under the joint authority of the National Training Board and the National Board of Education. The AMU Group was created as an independent authority in 1986 and employment training is delivered at 24 regional AMU Centres.

Bowland suggests that important functions for training boards include:

- achieving consensus on the broad aims of skills development;
- promoting contact and fostering compatibility between the many sources of training;
- developing agreed standards, curricula and certification procedures, including agreement on uniform job specification;
- administering (directly or through a designated body) apprenticeship and trade-testing schemes;
- certifying training institutions and trainers;

- undertaking research and information exchange;
- keeping abreast of labour market trends and the main lines of economic and social policy;
- raising the visibility and standing of vocational education and training; and
- assuring quality standards.

In this state-of-the-art paper, we shall explore the strengths and weaknesses of training boards established in a variety of nations. Our primary objective is to present a range of alternatives for consideration by nations desirous of establishing similar entities, tailored to their own particular requirements and conditions. It is our hope that these guidelines will facilitate future successful "transfers" of appropriate models to adapt training systems to conditions in interested countries.

This report will initially present "Guidelines for the establishment of National Training Boards" which have been extracted from the comparative studies, noted above. Immediately following the "Guidelines" section, the nine chapters from which these insights have been developed will be detailed.

II. Guidelines for the establishment of a national training board

The subsequent nine chapter discussion of the effectiveness of national training boards is summarised in the form of a checklist and guidelines for use by those countries considering the establishment of a national training board.

A national labour force training policy must be developed. The policy should be developed in tandem with a commitment to training on the part of government, employers and labour. This policy must be linked to the national planning process. Any policy should be based upon the commitment of government, employers and labour to provide relevant training. The key objective of training policy must be to create mechanisms which encourage the establishment of a long-term approach to planning and development, underpinned by institutional stability. Policy should not be "static," but should evolve to adapt to changing economic, social and political conditions.

The enabling legislation and/or by-laws required to establish a national training board should indicate:

a. the status of the training board; i.e., whether it is established at the national, state/provincial, or local level and whether it is a private, public, or non-governmental body;

b. the locus of the training board, i.e., under which agency, or government ministry, it is established and/or to which it reports;

c. the degree of autonomy conferred upon the training board, including whether or not the board has advisory, or decision-making powers;

d.the decision-making power of the training board, i.e., whether decisions are achieved through consensus or by majority vote;

e. the purposes of, and roles to be played by, the training board, i.e., its mandate;

f. the responsibilities of the training board;

g. the composition of the training board, i.e., the representativeness of its constituent organisations, and how members are to be selected;

h. particular attention should be paid to the method of appointment and length of service of training board members. The most common appointment procedure is for constituent bodies to nominate potential members for confirmation by government. Normally, members are appointed for a specified term, e.g., 2 - 4 years, but may be re-appointed;

i. the representativeness of the training board, i.e., whether it is tripartite (government, employers and labour) or quadra-partite (including education and training representatives) and the issue of equality of representation and voting rights;

j.the administrative structure of the training board, i.e., the size of the board, and its executive committee, as well as its sub-committee structures, including the delegation of responsibilities to the secretariat, or executive committee;

k. the financing mechanism for the training board, commonly either through direct government subsidy, ministerial budgetary allocation, training levy, tax rebates, employer-financed systems, or combinations of these systems;

l. the relationships between the training board and those institutions with which it co-operates, i.e., the board should have sufficient scope to co-ordinate all providers of training;

m. the linkages between the training board and co-operating bodies should be clearly delineated.

It should be kept in mind that each of these attributes is linked to, and influences, the others. Effective national training boards have balanced these structural and functional at-

tributes, while those which have failed to develop or maintain this balance have not been as effective.

Important functions for effective training boards should include:

a. achieving consensus on the broad aims of skills development;

b. promoting contact and fostering compatibility between the many sources of training;

c. developing agreed standards, curricula and certification procedures, including agreement on uniform job specification;

d. administering (directly or through a designated body) apprenticeship and trade-testing schemes;

e. certifying training institutions and trainers;

f. undertaking research and information exchange;

g. keeping abreast of labour market trends and the main lines of economic and social policy;

h. raising the visibility and standing of vocational education and training; and

i. assuring quality standards.

Related structural aspects of a national training board which should be considered are:

a. whether the board should be centralised, or decentralised, which is related to the size of the country and its training system, as well as whether the country is a federal or a unitary state. Current trends appear to favour decentralisation;

b. whether the training board should be participatory or mandatory, with respect to political and technical expertise and effectiveness. A hierarchical system of mandatory participation that would associate technical expertise with training delivery and political stature with policy formulation, similar to the German model, is suggested;

c. co-ordination between national and regional/local training boards and sectoral training boards is essential;

The composition of a national training board should take into consideration:

a. the balance between representation of all interested bodies with manageability of the board;

b. the size of the training board, which should be no larger than a maximum of fifty members;

c. the size, status and powers of the Executive Committee of the training board;

d. the length of service of training board representatives;

e. the hierarchy of training board membership, i.e., the representation of constituent bodies and the "power" exercised by those bodies.

National training boards should be both comprehensive and co-ordinative in order to be effective. Attention should be paid to the degree of co-ordination between policy-making and planning at the national level and the delivery of training. This co-ordination should:

a. identify institutional and/or sectoral areas of competition and establish mechanisms to avoid duplication of effort;

b. ensure that sectoral ministries work closely with the training system to specify projected types and levels of required skills;

c. decide the degree to which the focus is placed upon skill training or upon social programmes with training content;

d. develop a commitment to evaluation of the training system and mechanisms to feed-back evaluative findings to improve the training system;

e. avoid unnecessary competition for financial and human resources essential for a quality training system.

Financial resources to support national training boards are closely related to their mandates and degrees of autonomy. The various funding formulae available include:

a. inclusion in the capital and recurrent budgets of a ministry of education or labour (or other) to which the training board reports;

b. statutory equivalence to a ministry with funding from government sources, reporting to the Office of the President, or to a super ministry;

c. private, non-governmental (or quasi-NGO) status with funding from member bodies, e.g., employers' contributions;

d. either private, NGO, or governmental status with funding from a levy system to finance training.

e. either private, NGO, or governmental status with funding from tax incentives, i.e., as credits and/or rebates for training costs.

Effective training boards also have independent funding to support their co-ordinating (secretariat) and research functions, as well as training.

Decentralised training boards must establish a distribution formula and mechanisms to share funds between the national and state/provincial/ regional and local training boards.

Internal training board planning, implementation and operating systems vary, according to their legislative mandates and national traditions.

These functions are normally carried out by an Executive Committee under the authority of the training board. A strong executive manager, with an unlimited term of office, is required.

Internal training board operations involve:

i. determination of training policy;
ii. identification of training requirements;
iii. organisation of training;
iv. determination of training costs;
v. preparation of training plans;
vi. development of training programmes;
vii. implementation of training;
viii. keeping training records;
ix. evaluation of training;
x. continuous improvement of training;

The determination of supply and demand for training is undertaken by some training boards while others rely upon HRD and manpower planning provided by other governmental bodies. The success or failure of these functions can be attributed to the adequacy of funding and the available levels of expertise.

Effective training boards are characterised by the integration of manpower planning, curriculum development and delivery of relevant training.

Training boards are either directly involved in the delivery of training or exercise a co-ordinating role for training provided by other bodies. Training is delivered either in institutions, or on-the-job, or in a combination of institutional and workplace. Workplace-based training is usually in-service, while institutional training is often pre-service. Training boards must make a choice between investing in pre-service or in-service training, or various combinations and variations, thereof. The retraining of redundant and/or displaced employees may also be delivered either in institutions or on-the-job, or in combinations thereof. To be relevant, however, retraining must build upon precursor skills and experience, as well as take account of the trauma often experienced by workers facing redundancy and/or unemployment.

Apprenticeship training usually combines institutional and on-the-job training, with apprentices alternating between periods receiving training in schools and at the workplace. Normally, apprenticeship systems are organised in occupational areas that are registered by governments and/or training boards and which require testing and certification.

One variation on released-time apprentice training is the Modules of Employable Skill (MES) system. Training curricula are divided into discrete modules, according to a skill hierarchy that increases by competency levels from basic to advanced. Pre-service institutional training in the basic modules is supplemented by released-time training in advanced modules delivered between periods of employment. The MES approach enables apprentices to be certified stage-by-stage, regardless of changes in employment status, and provides continuity towards full certification in the event of unemployment. Training institutions

are better able to respond to changing labour market needs.

On-the-job training can also be delivered to smaller and/or remote workplaces by mobile training systems.

Curriculum development methods employed by training boards include centralised conventional methods, decentralised conventional methods (at the institutional level), task/activity analysis methods, and variants and hybrid versions of these methods.

Conventional curriculum development involves "experts" deciding appropriate content for each study area, with or without inputs from the "users" of trained personnel.

Task/activity analysis examines each job to determine the hierarchy of skills that an employee must know in order to perform that job. Analysis can be undertaken either by experts at the workplace or by co-operation between curriculum development experts and "users" of trained personnel. Cognitive and psychomotor skills are organised in a hierarchical learning sequence in either complete curricula, or in modularised curricular segments.

The degree of participation in curriculum development varies markedly among training systems. Whatever curriculum development system is chosen, it should be adapted to the unique economic, social and cultural requirements of each locality.

Testing and certification functions are either performed by national training boards, shared with ministries of education or labour, delegated to state/provincial bodies, or undertaken by private organisations. These functions include the establishment of both skill standards and certification schemes. They are best performed with the quadri-partite participation of government, employers, labour and training institutions. Such mechanisms should include the delineation of competencies and standards, leading to the certification of trainers.

The most effective national training boards are responsible for the testing and certification of those whom they train. However, custom and tradition influence the locus of the testing and certification functions in many countries.

The training and certification of instructional personnel can also be part of the mandate of a national training board, or shared with relevant bodies at various levels of government.

While this "how-to" listing of national training board attributes, structures and functions is neither inclusive nor exclusive, and is certainly not definitive, it is intended as a guide (or check-list) to be employed in the conceptualisation and planning of a viable system to co-ordinate national training efforts. The practical advice and guidelines in chapter II are best utilised in conjunction with the detailed sections in Chapter IV from which they have been excerpted, seen in the context of the country where it has been applied and adapted to the conditions in the country where it is going to be applied. The reader is particularly directed to chapter 9, "Lessons learned." Each attribute of successful training boards should be viewed in the context of the country where it has been developed and, if adopted elsewhere, should be adapted to its new country of application.

III. National training boards: Enabling legislation

The first item to be examined is the legislation establishing a Training Board. These boards can be established as a governmental, private, or para-statal ("public/crown/state corporation"), or quasi-non-governmental-organisation (quango) entity. They can be established at a national, provincial/state, or local level, or at either level for an entire industrial or service sector.

For example, SENAI (The National Service for Industrial Apprenticeship) and SENAC (The National Service for Commercial Training) in Brazil were established in 1942 and 1946, respectively, by The National Confederation of Industry and The National Confederation of Commerce, i.e., as private entities. However, both SENAI and SENAC are formally linked to the Federal Ministry of Labour. The Brazilian model comprises a national organisation with constituent state (regional) organisations. Castro and Andrade note that the "vertical lines of authority between bodies that represent the interest of enterprises and the decision foci in schools are much stronger than in the case of institutions that are independent or attached to ministries."

Under the 1969 Vocational Training Act (Berufsbildungsgesetz - BBiG), The Federal Institute for Vocational Training (BiBb) in Germany is responsible for national training policy, while the Laender (states) have Chambers of Commerce responsible for dual mode apprenticeship training within industry. An important feature of the legislation is that "administrative autonomy" is delegated to BiBb, which is comprised of representatives of business and industry, labour unions, employers and vocational training institutions. The Act applies only to on-the-job training, further training and vocational retraining, but not to vocational schools which, since Germany is a federal state, are under the jurisdiction of the Ministries of Education in each Land (state). The Act stipulates that youth up to 18 years of age may only be trained in a recognised training occupation.

From 1964 to 1990, the United Kingdom had Industrial Training Boards (ITBs) for up to 27 industrial sectors. Sweden has decentralised its training board infrastructure to the municipal level, under the (1991) National Agency for Education, which replaced the former National Board of Education and County Boards of Education. The city-state of Singapore has had a centralised Vocational and Industrial Training Board since 1973.

The French system was reformed by means of the law on Formation Professionelle Continue (Continuing Vocational Training) of July 1991, which codified provisions drawn from a series of labour-management collective agreements. The law covers all employers with ten or more employees, who are obligated to devote an equal percentage of payroll to training. Employers are allowed to determine how training contributions are to be used, either to finance in-house or externally-contracted training, or as contributions to one of the Training Insurance Funds established by employer organisations.

Enabling legislation should deal, inter alia, with the mandate, authority, composition, finance and administration of a training system. In countries with distinct levels of government, legislation may be required at the national, provincial/state and local/municipal levels.

Bowland indicates that the role and purpose of training boards should be clearly perceived and well defined "to avoid misunderstanding and unreasonable expectations." They should "reach decisions which are then binding on implementing agencies."

The composition of training boards should reflect all relevant and interested sectors. It is important to appoint representatives who have both an informed understanding of training needs and training delivery and sufficient authority within their constituencies to be able to speak for the interests of that constituency. Board composition should be balanced, rather than weighted in favour of one constituency or another. For example, overloading boards with civil servants from relevant ministries comprises one potential pitfall.

Castro and Andrade suggest paying particular importance to the method of appointment. A common procedure is for government to identify organisations which are entitled to representation and then to allow those organisations to decide whom to appoint. Another option is for appointments to be made by the minister responsible, but almost always upon the nomination of business and labour organisations. Rarely do governments appoint labour or business members over the opposition of their interest organisations.

While attention to such details might not be an important component of enabling legislation, its inclusion might prevent potential problems. For example, the appointment of employer representatives by the government might result in deferential, or docile, participation. In Germany, employer and labour representatives to BiBb are appointed by top employer and union organisations.

Common financing mechanisms have been the industrial levy system, tax rebate systems for training, direct government subsidies through ministerial budgetary allocations. employer-financed systems, and combinations of these systems. The Levy system is widely used in France, Latin America, Singapore and West Africa. In The Republic of Korea, employers can reduce their tax burden by providing training to unskilled employees. Brazil also allows tax reduction by twice the value of expenditures on training. The provision of fiscal power in enabling legislation might overcome problems they identified, such as the lack of power to veto budgets, vote funds, or change critical rules and regulations.

Ideally, enabling legislation should remain stable for long periods, rather than being drastically changed in response to economic and/or governmental changes. Examples of long-standing legislation include Brazil and Germany. In contrast, British legislation experienced significant changes in 1964, 1973, 1981 and 1988.

In addition, the legislation should specify the relationships between the training board and those institutions with which it co-operates. For example, the Singapore Skill Development System is a partnership of several agencies, industries, the labour movement and training institutions, acting collaboratively and complementarily. Ducci notes that SENA (the National Apprenticeship Service) in Colombia has had representatives of "employers' organisations from the three economic sectors" and labour union representatives from the largest unions. She also stated that INCE (National Institute for Educational Co-operation) in Venezuela "incorporated representatives of organisations of rural workers, workmen and employees and the chambers of agriculture, industry and commerce." Bowland points out that experience with the co-ordination of training systems "indicates that there is a lack of clarity about what should be co-ordinated, with what, by whom, for what purpose and how." This suggests that these issues should be addressed in training board enabling legislation.

Training boards should also have a sufficiently broad scope to co-ordinate all providers of skills training. The sector most often neglected is the non-formal training sector. However, SENA in Colombia and INA in Costa Rica provide useful models on how to include the non-formal and informal training sectors. This model was noted by Wilson to have been "transferred" back to Brasil with the creation of SENAR to deliver rural-based training.

The composition of national boards should be specified in the enabling legislation. The majority have tripartite membership: Government, Employers and Labour, while a few are quadripartite, with the additional participation of educational authorities. For example, the German dual mode system requires quadripartite cooperation, since part of the training is delivered in state (Land) institutions and part through in-plant training. The Singapore VITB is tripartite with representatives from government (Ministries of Labour, Education and Trade and Industry), employer organisations (Singapore Employers' Federation, National Employers' Council and Singapore Federation of Chamber of Commerce and Industry) and labour (The National Trades Union Congress). In addition, other members represent The Singapore Manufacturers' Association, the Economic Development Board, the Ministry of Defence, the American Business Council and The Japan Chamber of Commerce and Industry. The Swedish National Employment Training Board, and its constituent AMU Group, are also constituted as tripartite agencies, with the co-operation of trade unions, employers' organisations, local government representatives and educational authorities.

In spite of the logic favouring labour representation, several national boards have been overwhelmingly dominated by management; e.g. SENAI in Brasil and the Industrial Training Boards in the United Kingdom, following the increase in employer representation in 1988.

Experience with authority, compliance and enforcement of national board decisions indicates that more autonomy is preferable to less autonomy. Of course, the degree of autonomy relative to government ministries being co-ordinated can create difficulties.

Legislation conferring autonomy should deal, inter alia, with control over the finance, planning and delivery of training, trade testing and certification, and define relationships between the training board membership.

Authority varies from exercising decision-making power over the content of training, implementation of training, finance, supervision and control. For example, BiBb in Germany shares authority with relevant government ministries to decide which occupations will be regulated within the apprenticeship system, and the content and length of training for each occupation. At the next level, committees of regional Chambers of Commerce may decide which employers may offer apprenticeship training, and establish examination content within BiBb guidelines. The British ITBs, SENAI in Brazil, the Singapore VITB and other boards have the power to assess financial levies to fund training. At the other end of the spectrum, boards may only be advisory, as the Training and Enterprise Councils (TECs) which succeeded the ITBs and the MSC (later called the Training Agency) in the United Kingdom from 1988.

There is broad consensus that training boards function best when they have important decision-making powers. An advisory situation requires eliciting action from those entities (ministries) with authority, while those boards with decision-making powers are able to act upon their decisions with significantly fewer constraints.

If the enabling legislation separates training-related functions, such as Human Resource Development (manpower) planning, from the training board, then the linkages between separate agencies should be clearly delineated in that legislation. For example, the Singapore Skill Development System was noted by Pillay to comprise a partnership of several agencies, industries, the labour movement and training providers, acting collaboratively and complementarily.

While the Vocational and Industrial Training Board (VITB) is the national authority for skill training, overall HRD planning is carried out by the Ministry of Trade and Industry. In addition, linkages (including board representation) are formalised with The National Productivity Board, which is the national authority for development of productivity and quality in work, The Economic Development Board, which is a specialised provider of skills

for investment promotion, the Council on Professional and Technical Education, which plans institutional technical education and training, and the Skills Development Fund, which is the national agency for promoting training of workers by employers.

IV. Training board composition

A composition "formula" should be devised to balance representation of all interested bodies with manageability of the board.

While there is no "ideal" size for boards, there is consensus that a maximum of fifty members at the national level would facilitate meaningful discussion and action. An executive committee of five to ten often co-ordinates the work of the board. Often, in order to avoid the political embarrassment of excluding sensitive parties, boards tend to become too large and suffer in terms of efficacy. In addition, large training boards tend to become too formalistic and ignore the participation of parties with expertise and interest. Finally, large training boards are subject to manipulation by their secretariat, or executive committee.

Similarly, the length of service on training boards varies markedly from one jurisdiction to another. Normally, members are appointed for a specified term, e.g., two to four years, but may be re-appointed. Adams noted that no one interviewed for this study saw any positive benefit in limiting the number of years which any individual could serve. However, critics argue that long-serving board members tend to lose contact with the needs and desires of their constituents and often become bureaucratic.

Since the function of most training boards is to co-ordinate activities of various ministries and departments, in the public and private sectors, and at various levels of government, particular attention should be paid to the hierarchy - and its concomitant power - of constituent bodies. Bowland pointed out that, usually, education ministries are "senior" to labour, etc., in terms of the size of their budget, number of employees, etc. He discusses the co-ordinating ministry model, noting problems resulting from its locus in ministries of planning, manpower or labour and difficulties arising when the co-ordinating ministry tries to co-ordinate training undertaken by other ministries. He indicates that unfavourable "experience with the co-ordinating ministry mechanism has led to the growth of a second 'model' for co-ordination, that of the national training council or its equivalent," i.e., a national training board. He indicated that this "model" is promising, since it:

- can be relatively independent of any particular line ministry.
- can cover a wide spectrum of training providers, public and private.
- can represent a broad range of skill users.
- can be positioned and constituted to discharge a true co-ordination role, leaving the management of delivery systems to those best equipped to do so.
- can be tripartite in character.
- can appoint and control working groups for specific projects, such as curriculum development.

For example, the VITB in Singapore is a statutory board under the Ministry of Education, with whom it co-operates to attract school-leavers for its apprenticeship or training courses. Problems of inter-ministerial conflict are also likely. Wilson noted that competition between the Ministries of Labour and Education have frustrated access to levy funding by The Kenya Technical Teacher Training College and the non-formal Harambee Institutes of Technology. Eleven of the Latin American training boards are affiliated in various ways to Ministries of Labour, three to Education Ministries, one with the Ministry of Economics and one with the Ministry of Industry. In contrast, the National Manpower and Youth Council of the Philippines (NMYC) was established directly under the Office of the President. This resembles the attachment of INA (National Training Institute) in Costa Rica to the Presidency of the Republic.

While many boards endeavour to arrive at decisions through consensus, those which favour majority decisions often lose efficacy when out-voted constituencies lose interest and/or faith in the process and withdraw from participation. According to Rainbird, the Trades Union Congress (labour) refusal to co-operate with the Employment Training Scheme in 1988 led to their disaffection and eventual withdrawal from participation. BiBb in Germany and the Canadian Labour Force Development Board operate by consensus. The tripartite Swedish National Employment Training Board, and its constituent AMU Centres, also operate by consensus for "the implementation of public employment training."

The roles played by board members usually relate to their interests. That is, national governments are responsible for the economy and, therefore, labour market training; state/provincial governments are responsible for education, which may include vocational education and training; employers constitute the "consumers" of training; labour unions reflect the interests of their membership in continuing employment; and education/training institutions have vested interests in their survival.

Those nations which have had neither a commitment to a "training culture," nor experience with co-operation, often find their piece-meal training endeavours to be inadequate; particularly, in times of economic crisis or rapid technological change.

Under such conditions, employers often "poach" already-trained employees from one another, rather than invest in training. Those firms who do invest in training, then lose trained employees to those firms offering higher wages. When governments provide training it is often criticised as being too theoretical, lacking a practical orientation, unrelated to actual industrial needs, often is too expensive, and fails to respond to economic/technological change.

These conflicting scenarios need not preclude co-operation, as indicated by successful quadripartite training board participation, e.g., in the German BiBb. However, the British experience indicates that the exclusion of labour union representatives from policy-making for the non-statutory training organisations (NSTOs), established to replace the ITBs, resulted in perceptions that the boards lost their independence and became "extensions of the functions of existing employers' associations." The subordination of the ITBs to the MSC also resulted in the employer representatives' perception that they had become "arms of state policy," according to Rainbird. Similarly, the Canadian experience indicates that a new co-ordinating role must evolve when previous piece-meal efforts have failed. The new Canadian Labour Force Development Board (1991) has been organised on the quadripartite model, reflecting elements from Germany, Sweden and elsewhere.

Co-ordination between industrial and service sectors is essential for the successful functioning of a training board. The British Industrial Training Board experienced duplication and the failure to facilitate the transfer of labour from declining to expanding industries, due to the lack of co-ordination between the 27 or so ITBs in different industrial sectors. Bowland quoted an official of a provincial training board that "co-ordination becomes very difficult because while one department may have the facilities to train to a particular national skill level, others may not." Therefore, national mechanisms for "feedback" and "control" are basic requirements for effective training board systems.

Bowland has delineated several co-ordination issues, including:

- the need for sectoral ministries to work closely with the public training system to specify the projected types and levels of skill requirements and agree upon what the public system can and can not accomplish.
- there should be a commitment to evaluate the training system and "feed-back" evaluative findings to constructively improve the training system.

- establish mechanisms to ensure that, where sectoral ministries maintain their own specialised training facilities, training builds upon that provided in the public system and is geared to quality standards.
- avoid unnecessary competition for resources (funds for buildings and equipment and limited numbers of good instructors with practical experience) and of duplication (developing curriculum materials which already exist elsewhere), given that governments are habitually short of funds.
- clearly identify where competition between government agencies is healthy and where it is not.

The ITB Central Training Council was able to address sectoral skill requirements, but because the ITBs were not integrated into an overall national labour force policy, were poorly adapted to meeting regional needs, and did not cover all economic sectors, they failed to develop a functional approach to common core skills that would be transferable from one sector to another. This suggests that effective training boards must be both comprehensive and co-ordinative in order to be effective.

An interesting alternative structure evolved from 1976 in Venezuela when INCE developed specialised offshoots in the petroleum, agricultural, banking, insurance, tourism, construction, defense, transportation, health and penitentiary sectors. However, in contrast to the British experience, these bodies operated under the control of the INCE President, but with separate boards comprising representatives from each economic activity sector.

The subordination of the British ITBs to the Manpower Services Commission (MSC) from 1973 centralised tripartite coordination at the national level, but undermined the practical effectiveness of the ITBs at the industrial levels. In 1979, government support for ITB operating costs was phased out by the Thatcher government. This is an example of changes in legislation, designed to correct perceived problems, contributing instead to the demise of the entire system. In the British case, consequently, only the Construction Industry Training Board remains.

By the late 1970's, Rainbird noted that MSC expenditures had shifted from skill training to social programmes with training content. Similarly, Canadian policy from 1990 has been to re-allocate ten percent of Unemployment Insurance funds from income maintenance to skill training, while at the same time making the UIC fund self-supporting, i.e., with no funds contributed by the federal government. Board Membership includes representatives of "social action groups," including women, the disabled, visible minorities and Aboriginal people. This continues the traditional pattern of confusing social and economic objectives.

Canadian and U.K. experience suggests that the focus must be placed upon skill training, rather than upon social programmes with training content. The tripartite shared fiscal responsibility must be maintained, rather than shifted to employers (as in the U.K.) or employer-employee contributions (as in Canada). The experiences of Latin American training boards are instructive, especially the attention paid to "social considerations" by SENA in Colombia, which Ducci indicates began in 1968 to allocate ten percent of its budget to deal with the training of marginalised population groups and raise their standards of living, now only devotes 20 percent of its financial resources to informal sector training activities, even after 20 years. She concluded that "any changes that may have taken place in the field of activity covered by institutions can be considered as a qualitative trend, rather than a radical reorientation towards a new type of user." Adams noted that in France training policy since 1981 "has ceased to be thought of as a form of social welfare" and the new concept is that training is considered to be "an investment in economic development."

Governance of national training boards also impacts upon their effectiveness. Particular attention must be paid to specification of representation, according to considerations of equality, representativeness, and voting rights.

For example, the British ITBs (and later the MSC/Training Agency) began in 1964 with "an equal but unspecified number of employer and employee representatives, together with representatives from further and technical education." In addition, nominees of the Minister of Labour, the Secretary of State for Education and Science and any other interested Government Minister could attend. An independent chairman with "industrial or commercial" experience was appointed for each of the ITBs. The boards could appoint specialist committees with the approval of the Minister of Labour. The composition of the Central Training Council was similar to that of the ITBs. The 1973 Employment and Training Act shifted responsibility for employment and training from the ITB Central Training Council to the MSC. Under the 1981 Employment and Training Act, 17 ITBs were abolished and their functions transferred to voluntary employers' associations. With no provision for equal representation of trade unions, and differential voting rights for employers, the original tripartite governance arrangement disintegrated.

Governance of the German BiBb appears to be more structured with its Main Committee composed of four "benches:" Labour, Employers, the Laender (states), and the Federal Government. The first three benches have eleven seats on BiBb, while the Federal Government has five seats, but exercises eleven votes as a bloc. Labour and employer representatives are appointed by the top union and employer organisations. Previously, each Land (state) had one seat, but due to reunification the expanded numbers will result in re-structuring.

The Main Committee of BiBb only meets two or three times annually. A Permanent Commission, composed of about eight members drawn from the Main Committee in the same percentage composition, meets five or six times per year. Sub-Committees, such as the Research Sub-Committee, are responsible for carrying out BiBb functions under the direction of the Permanent Commission.

The new Canadian Labour Force Development Board (CLFDB) has 22 seats - eight for employers, eight for labour, two for educators/trainers, and four for social action groups representing the four Employment Equity designated groups: women, disabled, visible minorities, and Aboriginal people. Governments have ex officio status, with one representative of the federal government and five provincial representatives drawn from economic regions of Canada: British Colombia, the Prairie provinces, Ontario, Quebec and the Atlantic provinces. The Board is supported by a Secretariat, research staff and sub-committees.

From these examples it is evident that governance of national training boards should also reflect a tri- or quadripartite representative structure.

Similarly, these examples indicate that size considerations require the delegation of operational responsibilities to a Secretariat, or Main Committee, with research and co-ordination functions and provision of a separate budget to support these functions.

V. Training board structure

The first structural issue is whether the board should be centralised or decentralised. The mini-case-study descriptions suggest that this decision should be taken upon the basis of the size of the country and its training system. For example, Singapore is a small, centralised republic and its VITB does not require decentralisation. Castro and Andrade note that in another small nation, Costa Rica, INA (the National Apprenticeship Institute) established Liaison Committees at the sub-sectoral economic level, with representatives from the economic branches concerned and professionals from INA. This decentralised structure has enabled INA to operate closer to the "users" of trained people.

If there is a trend, it might be towards decentralisation, as suggested by the recent Swedish reform and the new Canadian Labour Force Development Board. The German BiBb model, apparently adopted by Canada, is structured with both federal and Land (state) councils. On the other hand, attention should be paid to the form and manner in which a system is decentralised, as the U.K. experience suggests. If, as in the British ITB case, industrial sector decentralisation is chosen, then some form of national co-ordinating mechanism seems necessary. Initially, such co-ordination was provided by the Central Training Council and later by the MSC/Training Agency. In countries where both employer organisations and unions are weak, however, it has been suggested that a better strategy might be to begin with local and/or regional boards and evolve towards a national organisation. Of course, this approach may be problematic in some countries, since it runs counter to prevailing centralisation tendencies in governments.

Both components of the Swedish parallel system are decentralised, with the National Agency for Education and the National Employment Training Board operating at the national level and Municipal Education Authorities and Regional Labour Market Boards operating, respectively, at local levels.

The second structural issue is whether a board should be participatory or mandatory. This question relates to issues of technical expertise, political representativeness, and the manageability of a training board. On the one hand, if membership is mandated, then committees often fall into desuetude and, without renewal, cease to function. The Canadian experience with Training Advisory Committees at the community and technical college level is an example of this type of problem. Further, representatives with particular technical expertise often lack political stature and efficacy. Alternatively, those with political stature usually have insufficient knowledge of training policy and practice. On the other hand, technical expertise is best utilised if its locus is close to the sites where training is delivered. A viable compromise might consist of a hierarchical system of mandatory participation. The best example of this is the German system, which comprises a hierarchy from the level of the individual enterprises to the federal level.

Training committees at the individual enterprise level are rare, but worthy of examination. Their absence in some countries may account for the failure of many training initiatives to attain their stated objectives. Most training in Germany takes place inside firms, under the dual system. Prior to 1969, training within enterprises was under the exclusive control of employers. Works councils have been statutorily mandated since 1969 for all firms with more than ten employees (although works councils had been in existence since after World War I). These councils are elected by workers and have the right to participate in establishing and implementing training policy at the level of the individual enterprise. In addition, works councils have

other responsibilities, such as ensuring that employment standards legislation is adhered to and that employers comply with the terms of collective agreements. While works councils are independent of trade unions, most council members are active trade unionists. Collective bargaining does not take place at the enterprise level, but rather between unions and regional employers associations.

At the Laender (state) level, 83 Chambers of Commerce are responsible for apprenticeship training at the enterprise level. Representation is tripartite, rather than quadripartite, with educational representatives in attendance but without voting rights. Local chamber committees decide not only which employers may train (within the context of the Vocational Training Act - BBiG), but also have responsibility to manage the number of available training places. Their responsibility extends to co-ordination of training within schools, as well as in enterprises, under the dual system. Chamber training committees also set trade certification examinations.

At the national level, participants on the BiBb managing board are not from the highest executive levels, but rather second echelon, e.g., vice-president or equivalent, are well-versed in training issues and have high credibility. Although the composition of BiBb was noted earlier, it is instructive to note that employer representation is structured with two representatives each for The German Federation of Employers, the German Federation of Industry, the Chamber of Commerce and the Chamber of Handicrafts, with the Chamber of Agriculture, Retail Employers and the Liberal Professions having one representative. This representation is important, since most training funds originate from employers.

The Canadian Labour Force Development Board was designed to replicate this three-level hierarchy: the national, provincial and local levels. These are to be complementary non-governmental structures. For example, the Province of Ontario Training and Adjustment Board (OTAB) is currently being established. At the provincial level, inputs from labour, business and community groups will determine provincial training priorities. Provincial boards will function to provide independent judgements on the value of federal and provincial training efforts, advise on training priorities, the degree of co-ordination, overlap, duplication, or gaps between federal and provincial programmes, and to advise on the adjustment of expenditure patterns by provincial and federal governments.

Since training takes place at local, or sub-regional, levels, federal expenditures for skills training are to be decentralised to render spending decisions more compatible with the training needs of individuals and the priorities of local labour markets. Sub-regional boards are to be established in the 62 economic regions defined in the Unemployment Insurance Act (22 in Ontario). Their mandate also includes the guidance and direction of the operation of training programmes within the broad national guidelines, setting clear standards of equity, quality and effectiveness. These boards are also to develop local skills training plans, identify training providers and purchase "training seats" from either community and technical colleges or enterprises, to best fit the needs established. They are delegated responsibility to commit government funds available under contribution agreements. Variations are envisaged in the composition and membership, according to local requirements with federal participation in an ex officio capacity. All three levels are to be linked in order to effect co-ordination and information-sharing.

From these two examples it is evident that issues of co-ordination of training activities and labour market skill information are directly related to the structural organisation of training boards. As was evident in the British examples, the lack of co-ordination between sectoral and national/regional boards created problems which were addressed by the establishment of the MSC in 1973. Therefore, attention must be paid to the establishment of linkages between hierarchical levels for policy formulation and the determination of skill training requirements.

The functions of national training boards are usually delineated in their by-laws, rather than in their enabling legislation.

For example, SENAI by-laws specify its general purposes:

- vocational education of apprentices for industry (14 - 18 year old boys and girls, interested in becoming skilled workers);
- assistance to training programmes conducted by industries;
- training, upgrading retraining and specialization programmes for adult workers;
- grants-in-aid for further education;
- co-operation in technological investigation and related activities aiming at industrial development.

In contrast, the 1979 Vocational and Industrial Training Board Act of Singapore lays down the principal objectives of the VITB as:

- to provide for, promote, assist in and regulate the training or apprenticeship of persons employed in or intending to be employed in commerce or industry, and to upgrade the skills of such persons by providing advanced training in skilled work or otherwise;
- to establish the nature and length of the training for any employment in commerce or industry, and the further education to be associated with the training, the persons by and to whom the training ought to be given, the standards to be attained as a result of the training and the methods of ascertaining whether those standards have been attained;
- to conduct such programmes of further education as may be required from time to time.

Another function which might be delegated to national training boards is the licensing, supervision and inspection of training delivered by private institutions. Bowland suggests that this role should include the regulation of private vocational schools. Often, this is a role performed by ministries of education or labour. In order to achieve effective control over the national training infrastructure, and effect linkage between training goals, policies and strategies, this role might better be played by a national training board. The certification and licensing of trainers exists in Germany, Japan and Korea and is being explored in Australia, Singapore, South Africa and the U.K.

VI. Financial resources

Financial resources for training boards appear to be closely related to their degree of autonomy. At least four different funding systems are discernable among the national training boards examined. Some boards have no resources other than those provided by the government ministry to which they report. Other boards receive generous funding from government, while still other boards are entirely supported by employers. Finally, many boards receive funding through an industrial levy system, which is a 1 - 2 percent tax on all payrolls.

At one end of the spectrum, is the Hungarian National Labour Market Committee whose mandate is to decide the distribution of the government's training budget, in addition to overseeing state policy with respect to the labour market. The committee has no independent budget and depends upon the government for all its resources, including meeting rooms, information, etc. The new Canadian Labour Force Development Board is also mandated to set priorities and develop an annual expenditure plan for the use of re-directed Unemployment Insurance (UI) funds to support training and retraining, but it has also been given independent funding to support its secretariat and research staff. Bermant, Kirszbaum and Brandon point out that when training is state-funded, it must "compete with all other programmes which receive government funding." This can often be disadvantageous to the quality of training.

At the other end of the spectrum, BiBb in Germany receives ample funding from the government and its staff is to a large degree independent of any government ministry. Moreover, both trade union and employer organisations in Germany have substantial independent funds and training experts to undertake research and formulate policy positions. The cost of the in-plant training of the BiBb dual system is borne almost entirely by business, while the Laender (states) bear the cost of the in-class portion. Streeck notes that "in small, medium-sized and artisanal firms the chances of recovering workplace training costs in the course of an apprenticeship are relatively good" and in large firms cost recovery plus is assured, because trainees tend to stay with the firm when they complete their training. A key reason for the German success was employer involvement, motivated in part by their financial burden.

The French Law on Continuing Vocational Training of 1971 originally set the training levy at 0.8 percent of payroll and was anticipated to rise to 2.0 percent by 1976. However, since the anticipated rate of economic growth did not materialise, the 2.0 percent rate was never attained. Between 1974 and 1977, the rate was one percent and has been legislated at 1.1 percent of payroll since 1978. Since 1987, the levy rate has been fixed at 1.2 percent of payroll. As part of the total levy, companies must pay 0.2 percent of their total wage bill to finance the training of unemployed youth. Of the remaining 1.0 percent, employers may choose the manner in which the levy is spent on training; either by financing in-house or external training, allocating funds to local or nationally-approved training bodies, or by contributions to a Training Insurance Fund (Fonds d'Assurance Formation [FAF]).

Many industrialised nations have established traditions and practices which preclude the introduction of innovative measures to finance national training systems. Debate prior to the establishment of the new Canadian Labour Force Development Board weighed alternatives and documented attitudes regarding such financing systems. While on the one hand it was acknowledged that "corporate income tax policies have a major impact on the behaviour of Canadian companies," it was felt

that levy-grant schemes "entail the creation of a vast bureaucracy to collect taxes (and) remit grants." While not recommending a levy-grant system, the Canadian Labour Market and Productivity Centre study did recommend, on the other hand, a national training target of at least one percent of payroll to support private sector training. It was also felt that levy schemes encourage "bureaucratic interference in private decision-making." Rather, a "tax incentive approach to private sector training" was favoured, since "the administrative and bureaucratic costs involved are relatively small." It was concluded that such tax incentive mechanisms "can be designed in a flexible manner to provide both for approved on-the-job training as well as institutional training." Labour representatives on the study task force, however, did recommend a levy-grant system in their minority report. Similarly, the U.S. Commission on Workforce Quality and Labor Market Efficiency recommended in 1988 that a new "corporate income tax credit to stimulate human capital investment," including the stimulation of new investment in training, be devised.

While Sweden does not have a direct training levy system, Granander notes that "labour market fees, 'renewal funds,' and taxes related to training are ... imposed on enterprises." The 1975 General Educational Leave Act established a levy of 0.15 percent of payroll to support leave to study general vocational or trade union subjects, which was increased to 0.25 percent in 1978. In addition, the National Labour Market Board (AMS) is financed through a combination of general taxes and employers' contributions, based on a 2.0 percent levy on wages. In 1985, legislation established a Renewal Fund which required all companies with net profits exceeding 500,000 Kroner to allocate ten percent of their adjusted profits as a one-time deposit fund to support either training or research and development initiatives. All education delivered in institutions "is in principle financed through Ministerial and Municipality budget allocations." However, the National Employment Training Board, which is decentralised and financially accountable, receives an annual budget allocation that is provided to Regional Labour Market Boards to purchase training services at AMU Group Centres or from private institutions.

The industrial levy system also has many variations. Basically, these levies, or taxes, are a redistributative mechanism that enables enterprises that do not train to contribute towards the costs of those investing in training. A levy, or tax, is assessed on payrolls, usually of one percent or greater. Grants from the accumulated levy fund are given to those enterprises providing training and this functions as an incentive. The problem of "poaching" noted earlier becomes less pervasive, since all employers have invested in training, in one way or another.

The objectives of levy-credit systems, incorporating both levies and tax credits, include:

- recognition in public policy that training and development are responsibilities shared by employers and government.
- provide incentives to induce enterprises not providing training to change their policies. While the "carrot" of government grants may not be an effective incentive, the combination of "stick" (loss of income) and "carrot" (tax write-offs) should be effective.
- provide a more equitable distribution of the training burden among enterprises. A few conscientious employers should not be expected to act, in effect, as training institutions for an entire industry.
- encourage a "free market" for training, since employers could negotiate training directly with educational institutions, rather than applying for government grants.
- involve employers more directly in the design and implementation of training programmes.
- encourage employers to better assess their training needs, since they become direct consumers of education and training.
- reduce the "fear" of losing skilled personnel to competitors, since all companies would be required to provide training.

- levy systems, in effect, "pool" training funds to spread a burden which is often too heavy for smaller enterprises to bear.
- encourage the growth of dual system programmes which combine in-class instruction with on-the-job experience.

The longest continuing levy system is that of SENAI in Brasil which has made one percent of all monthly payrolls available to support training since 1942. Enterprises employing more than 500 workers contribute an additional 0.2 percent levy. The levy is collected by the Ministry of Social Security and 15 percent is allocated to National SENAI and 85 percent to SENAI Regional Departments. Although INA in Costa Rica serves all three economic sectors, agricultural enterprises are exempt from levy contributions. The Singapore VITB benefits from the Skills Development Levy Act of 1979, which provides a levy of one percent on the monthly wages of every employee earning S$750 (US$420) or less, paid into a Skills Development Fund. As wages have risen, contributions have been falling and the levy has been reduced from a high of four percent to the current one percent. Levy funds support both training within industry and institution-delivered training in Brasil, France and Singapore.

Ducci observed that Latin American training boards "desired to find a formula that, on the one hand, would allow the institutions sufficient autonomy in financing and decision making, and on the other, would enable them to adjust permanently and automatically to the variations of the demand for skilled labour. It was logical, therefore, to depart from the idea of a fixed budget and arrive at a formula in relation to the expanding economic activity. The contribution of the enterprises in proportion to their payroll of salaries and wages served the purpose of maintaining a continuous relation(ship) with the demands that they themselves would generate in virtue of their growth; additionally, it implied the definitive recognition of the responsibility of the enterprises in training the working force."

The ITBs in the United Kingdom were funded by a levy-grant system between 1964 and 1973 which varied by industrial sector. For example, the Engineering Industry Training Board levy was fixed at 2.5 percent of payroll. The single remaining ITB, the Construction Industry Training Board retained its levy-grant system, because its membership comprised small firms employing casual labour. which were perceived as being "unable or unwilling to train," according to Rainbird. The 1973 Employment and Training Act weakened the powers of the ITBs by replacing the levy-grant system with a levy-exemption system and excluding small firms from levy contributions, according to Rainbird. She also noted that "levy-exemption is more bureaucratic and rests on the premise that national or sectoral requirements equal the sum of the requirements of individual firms." The frequent legislative changes in the United Kingdom resulted in an initial shift of funding to the public sector under the Youth Training Scheme (YTS), which then shifted funding responsibility back to employers.

Chad, the Cote d'Ivoire, Guinea and Madagascar have adopted a training levy of about one percent of payroll, similar to that developed in France in the 1970s. The current levy in France is 1.5 to 2 percent. However, in these cases funds are not controlled by an independent training board, but rather go into general government revenue.

Corvalan reported that INACAP (National Training Institute) in Chile was originally financed from the government budget. When privatised by the Pinochet government, they lost their government financing and were told to sell services to enterprises. Under the precarious conditions in which Chilean private firms survived economically, they could no longer afford to sponsor apprentices for training. The end result was that financing formula changes resulted in a radical change of training clientele, from poor apprentices to the children of the middle class. Thus, the entire orientation of INACAP was significantly altered.

There appears to be an emergent trend of shifting the financial burden to support training to employers. This trend appears to be a concomitant of the interest in "transfer" of the German dual system. Singapore has recently introduced legislation modifying provisions of their Skills Development Levy Act to phase out the levy and make training the responsibility of employers. Although the Israeli Ministry of Labour was interested in the German dual system, its efforts to convince employers to assume more of the costs of training met resistance because taxes were already perceived as being too high. Recent Canadian experience indicates a different sort of shift of the burden of financing training from government to employees and employers, through the diversion of Unemployment Insurance funds, which no longer include government contributions. The programmatic emphasis has also been shifted from passive income support of the unemployed towards investment in training. This somewhat resembles the levy system, although UIC contributions are paid by both employers and employees. Unfortunately, the withdrawal of federal government funding and recessionary economic conditions precipitated two contributions increases totalling 30 percent. Australia is encouraging greater private sector training by means of a tax on enterprises that do not engage in training.

In Canada and the U.S.A., an interesting variant has evolved in which labour-management collective agreements provide for retraining of redundant employees by means of a payroll tax. The United Auto Workers entered into an agreement with the Ford Motor Company to establish a training fund to support the training of employees made redundant as the result of technological change.

These examples also lead to the conclusion that the structure and operation of nearly all attributes of a training board system must be linked to one another. In a dual system the government is responsible for institutional aspects of training, while employers are responsible for in-plant/enterprise training. This links funding to quadripartite participation by employers, labour, government and educators/trainers. The levy system in Brasil taxes payrolls to fund both SENAI institutional training for apprentices and on-the-job training and retraining. While both employers and employees benefit, employees have little or no input in SENAI decision-making, as it is under the aegis of the Confederation of Industries.

Castro and Andrade also point out that the elimination of penalties, or disincentives, to training in some countries would contribute to the financing of training. For example, they claim that tax depreciation rules in the U.S. functioned as a disincentive to invest in training, compared with investment in fixed capital. They quote Middleton, who observed that "investments in capital equipment could be written off over 15 years, with a correspondingly lower cost in any budget year, while training costs had to be budgeted in the year of delivery. Thus "from the point of view of annual profits, training was a much riskier investment."

VII. Delivery of training

Some training boards, like SENAI and the VITB, are directly involved in the delivery of training, while others, like the ITBs, BiBb and the Canadian Labour Force Development Board, operate at "arms length" from training institutions and enterprises.

Training is delivered either in institutions, or on-the-job, or in a combination of institutional and workplace locations. Institutional training is predominantly pre-service preparation for eventual employment that usually emphasizes theory, while training delivered at the workplace is predominantly in-service, either for the skill upgrading or retraining of existing employees, and is more practical than theoretical.

Noah and Eckstein indicated that "while collaboration between business/industry and the schools is widely supported rhetorically, it has not proved to be easy to install and maintain in practice. By tradition, business/industry has been excluded from direct participation in general education in the secondary schools, and the schools continue to maintain a certain degree of defensiveness against what they view as 'outside interference' in their work. At the same time, business/industry continues to feel that it has a special expertise and interest in vocational training, and should be its main provider."

Apprenticeship usually combines institutional and on-the-job training. Among its various manifestations are: (a) the block release, or "sandwich," system in which apprentices are released to spend up to thirteen weeks per year in school and the remainder training on-the-job; (b) the German dual system provides for a division of responsibilities between employers and government, in which employers release apprentices to Land (state) vocational schools to receive general education in both technical and cultural subjects for one or two days per week, while receiving in-company training during the remainder of the work week.

There are several variations on the institutional and on-the-job training delivery systems that are appropriate for the delivery of training.

A promising variation on released-time apprentice training is the Modules of Employable Skill (MES) system advocated by the ILO. This system is most relevant in smaller nations that are unable to afford an expensive training infrastructure, or where youth can ill-afford a lengthy training period. In the MES system, the training curricula are divided into discrete modules, according to a skill hierarchy that increases by competency levels from "basic skills" to "mastery skills." Pre-service institutional training may be provided in the basic modules and, once employed, apprentices may be released to study advanced modules at various stages in their career. The modular approach enables apprentices to be certified stage-by-stage and provides continuity and progression towards full certification, regardless of whether the trainee changes employers during the lengthened training period -- a problem which has, heretofore, resulted in failure to become certified. Another advantage of the modular approach is that it facilitates a better response by training institutions to changing needs in the labour market.

Granander notes that "experience from countries where the MES materials have been introduced shows that the number of MES elements required for a student to become employable is at least the size of a normal instructional book. The present MES elements are too small and its applicability would be reinforced by putting together elements from the same areas into professional manuals." This

observation is instructive, since Sweden is one of the major sources of the ILO MES system.

Another useful variation for the delivery of in-service, on-the-job, training is the mobile training system. In this system providers of training bring mobile units to enterprises, often housed in large trailers, to deliver training to apprentices at the workplace, or to provide in-service upgrading for worker retraining. Australia and Indonesia utilise mobile workshops to provide training in rural areas. The Philippine NMYC also has considerable experience with mobile training in its provincial out-reach programmes. In Latin America, SENAC (Brasil) used mobile units to expand and diversify their "intensive training courses of short duration," INCE (Venezuela) "used these units to widen the range of their training programme for youths, initiated in 1964, in order to reach thinly populated areas, or areas of diversified economic activities which did not justify the installation of fixed centres," SENA (Colombia) and INA (Costa Rica) used mobile units "to give increasing attention to the agricultural and livestock breeding sector(s)," and INACAP (Chile) "adopted the use of mobile units from 1966 onwards for the southern zone of the country, especially in the building and electrical maintenance trades," according to Ducci.

Yet another variation in the delivery of both institutional and on-the-job training has been the increasing usage of distance delivery methods. While distance delivery originally comprised only correspondence instruction and the use of radio (and later television), this delivery mode is now multi-media in its operations. With the exception of SENAI in Brasil and SENA in Colombia, the majority of distance delivery applications have not been developed by national training boards. Rather, distance delivery innovations and developments have ranged from the U.K. Open University and its short-lived replication in the U.K. Open Tech to the widespread use of teleconferencing and computer-delivered-instruction by large multinational corporations. One interesting application in the private sector was the development of employment upgrading programmes for offshore oil platform employees by PETROBRAS, the Brasilian oil company. Although this delivery system remains in its "infancy," the promise for the future is nearly limitless. If the U.K. Open Tech had not been given a self-sufficiency deadline by the Thatcher government, its innovative delivery of technical training and upgrading courses, tailored to the requirements of participating enterprises, would have been a model worthy of replication by training boards in many other countries.

A choice must be made between investing in pre-service training for potential employment and in-service training and/or upgrading of those already employed. Wilson suggests that many LDCs can not absorb large numbers of pre-service trainees at current levels of modern sector development, since scarce resources may be wasted on training for jobs that might not exist. Under these conditions it is preferable to invest in in-service training of those already employed. He notes that the "optimal balance ... must be determined by the traditions, requirements and capabilities of each nation. That is, there is no universally-applicable criterion, or standard, or even model."

Therefore, each nation must determine its optimal balance between the type and delivery mode of training, according to its own requirements. If we have learned anything from studies of how training innovations and systems "transfer" from one country to another, it is that the transferred systems must be adapted to function in their new locale. The alternative is failure to become relevant to local conditions.

VIII. Institutional planning and operations

In the context of institutional planning and the operation of training systems, a choice must also be made between the degree of centralisation and decentralisation. Once again, there are examples of successful (and unsuccessful) training systems that are centralised or decentralised. Often, systems which are decentralised in federal nations, are centralised at the individual state levels.

Perhaps, the most centralised training board system is that of SENAI, which while decentralised at the federal level with National SENAI, is centralised at the state level for the delivery of training. National SENAI co-ordinates the implementation of policies and norms decided by the National Council and the 22 SENAI Regional Departments deliver training. This "executive decentralisation" enables the Regional Departments "to act in close co-operation with industries in their respective jurisdictions ... to fulfil the manpower training needs according to the peculiarities of each region." Therefore, each Brasilian State SENAI differs from its counterparts in other states. The most prominent example of these differences is the result of competition between Rio de Janeiro State and Sao Paulo State. This competition has ranged from the adoption of instructional technology innovations to support training by the Sao Paulo SENAI to the development of the Individualised Training System by the Rio de Janeiro SENAI.

Related to the issue of centralisation-decentralisation is the degree of autonomy either retained at the national level or decentralised to state/provincial, and even local, levels. In the SENAI system, each state SENAI is autonomous, but co-operates at the National SENAI level. The autonomy of State SENAI systems supports a high degree of centralisation at the state system level.

State SENAI autonomy and the centralised planning and co-ordination of operations is best evident in the area of training design and delivery. The training curricula are developed centrally, and then are used to design, build and equip the Centros de Formacao Profissional (SENAI schools) and, subsequently, to order and deliver training consumable materials to each school when needed. This degree of planned integration does not appear to have been replicated by any other training system. Although no studies of the economics of SENAI integration are known to have been undertaken, it is suspected that such integration contributes to cost-effectiveness.

There are several curriculum development approaches used by national training boards. These include the task/activity analysis approach favoured by SENAI and conventional curriculum mechanisms, plus variants and hybrid versions of both systems, such as DACUM. Conventional curriculum development has usually taken place in Ministries of Education, where "experts" decide appropriate curriculum content for each area of study, often on the basis of "intuition," rather than any scientific determination of appropriate content, and either with or without input from the "users" of these skills. Andrade noted that Labour and Education Ministries in Latin America encountered problems, such as "limited financial resources to renew curricula, train instructors, and introduce new systems." In contrast, he noted that national training boards did not encounter such co-ordination difficulties in their curriculum development.

The Task Analysis Method can be traced to Victor della Vos, Director of the Imperial Technical Institute in Moscow in the 1880's. Briefly, the method involves the detailed examination of each job and the elaboration of the constituent operations and tasks that an

employee must perform. The method determines (a) what the employee must know (cognitive skills) to be able to perform each task; (b) what the employee must do (manipulative skills); and (c) which precursor skills must be learned in a hierarchical sequence. This information is then used to design the most effective curriculum to teach each particular occupation. The method has been adapted to the service and information sectors by SENAC in Brasil and to activity analysis in the U.S.A. by Silvern. Activity analysis enables the design of curricula in the service, informatics and social sectors, since it focuses more upon the information and actions necessary to perform jobs than technical knowledge and procedures.

The most interesting adaptation of the Task Analysis method has been its perfection by SENAI since 1942. Their *Serie metodica ocupacionais* (Shopwork Methodical Series) comprises a task sheet describing operations inherent to a particular task (what the trainee should do), an operation sheet showing how to perform each operation, a technological information sheet describing the tools and equipment essential for the performance of each operation, and (from 1974) a complementary information sheet explaining the why of an operation or set of operations, in order to introduce relevant theory into this practical training system. The apprenticeship cycle of the SENAI system follows five steps: (1) study of the task, (2) development of a work plan, (3) demonstration by the instructor and/or through individualised multi-media packages and application by the trainee, (4) performance of the task in the workshop, and (5) evaluation to assess task mastery. The apprenticeship cycle is completed during a supervised training period within an industry or business.

As noted above, the Rio de Janeiro SENAI individualised this system by disaggregating the complete Shopwork Series into discrete modules that trainees can learn at their own pace, seeking testing when they believe they have achieved mastery. Self-paced learning is facilitated by multi-media support which delivers demonstrations by audio and video cassettes, films, and currently computer-assisted-instruction, including videodisc and simulation applications. Workshop practice takes place when trainees feel comfortable to apply learning.

Task and theory sheets in varying combinations are employed by national training boards in Singapore, Sweden, most Latin American training systems, and individual institutions in most countries. Although their use began in "blue collar" trades, the adaptations noted herein have made their use commonplace in many service and information sector training systems, as well. In addition, there are remarkable similarities between the structure of the process and curriculum development approaches used to produce computer-assisted-instruction software. This suggests that a convergence between conventional and task/activity approaches to technical (and even "academic") curriculum development methods and approaches has taken place.

The Swedish experience illustrates the role which training boards can effectively play in conventional curriculum development. Like many other developed nations, curriculum development has been undertaken in cooperation with publishers of textbooks and manuals. Usually, this approach conforms to broad curriculum guidelines laid down by a Ministry of Education. The new National Agency for Education will continue to centrally develop curriculum goals, outline the 16 constituent programme areas, and identify a core of subjects common to all programmes. However, Vocational Training Committees have cooperated with both hardware (tools and equipment) and software (books, audio-visual, etc.) firms to produce learning materials. This appears to have decentralised the curriculum development process and increased participation of labour and business representatives in the process.

The transfer and adoption of the SENAI system at INA (National Apprenticeship Institute) in Costa Rica resulted in its adaptation to the sequential training requirements of a small national economy. This development contributed to the development by ILO of the

Modular Training System (MES), which re-organised the sequencing of training into basic and advanced modules, so that trainees can be provided with basic skill training in school, enter employment, and subsequently return to the training institution (or learn at the workplace) to receive instruction in advanced modules after one or more years on-the-job. Granander notes that Sweden employed an individualised modular training concept from the 1950s and, later, contributed to the ILO MES project in the 1970s.

Similarly, the DACUM approach, developed at Community Colleges in the Maritime Provinces of Canada in the 1960's, produces Terminal Performance Objectives (TPOs), which are then used as inputs to the conventional curriculum development process. DACUM is an acronym for Developing A CurriculUM and employs a somewhat different task analysis approach. Whereas SENAI and similar systems send trained Task Analysis personnel to enterprises to undertake analyses by means of a standardised method, the DACUM approach brings curriculum developers together with management and union representatives to (a) determine the objectives, (b) subordinate industrial, or service, tasks and operations to each objective, and then (c) determine the most effective sequencesand timing for training. This is accomplished in a 3-4 day session, during which each task is written on a 3x5 card which is placed below each objective on the wall of the conference room. After protracted discussion, agreement upon the placement of each card is attained and a photograph is taken of the wall (or the information is entered into a computer "spreadsheet"). This photograph (or spreadsheet) is then converted into a DACUM Chart for use in training programme design and/or curriculum development, usually by individual training institutions. This system has evolved to preserve the autonomy which Canadian community and technical colleges have guarded in their curriculum development since the 1960s, while also facilitating inputs from the "consumers" of training. This is in marked contrast to the centralised curriculum development intrinsic in the SENAI model.

Currently, the competency-based curriculum development focus is prominent in Australia, North America, Singapore, South Africa and the United Kingdom. The International Board of Standards for Training, Performance and Instruction (IBSTPI) evolved from the American Society for Training and Development (ASTD) and National Society for Performance and Instruction (NSPI) and has focused upon competencies for trainers. In the United Kingdom, the National Council for Vocational Qualifications (NCVQ) has developed national standards for all occupations, including trainers. The Australian National Training Board (NTB) is currently establishing Competency Based Training (CBT) in consultation and cooperation with industry. Singapore has just proposed the development of skill standards for trainers, leading to the extension of existing certification mechanisms already implemented by the Institute of Technical Education (formerly the VITB).

Again, it appears that whatever curriculum development approach is adopted by a national training board, it is important to adapt that system to local requirements. Adaptation will minimise problems encountered in many countries, resulting from competition, inadequate technical knowledge of training board members, inter-ministerial rivalries, and the unique requirements of local enterprises.

From these mini case studies, it is also apparent that the degree of participation in curriculum development processes varies markedly in each national training system. While the centralised SENAI approach is delegated to task analysis "experts," the Singapore VITB employs tri-partite participation and the German BiBb involves employees through Works Councils and employers through the Chambers.

The determination of supply and demand for training is undertaken directly by some national training boards while others rely upon HRD planning provided by other governmental bodies. The location of HRD planning must be established, as competition between com-

peting bodies often results in duplication and/or ineffective HRD planning efforts. A case in point is the Philippines, where competition over which agency is responsible for manpower planning, coupled with the provision of inadequate resources to undertake manpower studies, has resulted in the production of no comprehensive manpower data suitable for effective HRD planning.

SENAI undertakes large-scale research within enterprises to ascertain the current and likely future demand for skills. This information is then utilised in the planning of SENAI operations. Since 1976, both SENAI and SENAC also participate in the National System of Manpower Training, which co-ordinates manpower planning at the federal levels. What sets SENAI apart from most other national training boards is its integration of manpower planning and curriculum development. Castro and Oliveira note that the SENAI occupational analysis process has three steps. First, a market analysis is performed to determine quantitative demand for an occupation, as well as the nature of the productive process and the required qualifications of the worker. Second, conventional techniques of occupational analysis are employed to specify the totality of the tasks and know-how necessary to perform that occupation. Third, an analysis of job levels, or grades, is undertaken todetermine the skill hierarchy. The final product of these analyses are the course objectives and curriculum contents.

In contrast, overall manpower planning in Singapore is carried out by the Ministry of Trade and Industry. The demand and supply of professional and technical manpower is next reviewed by a Council on Professional and Technical Education (CPTE), comprising the Ministers of Trade and Industry, Finance, Labour and Education. The CPTE approves supply-side tertiary level enrolments at the universities and polytechnics and, at the skilled level, the technical training institutes operated by the VITB.

This co-ordinating function is quite important, as the British experience indicates. In order to correct perceived shortcomings of the 1964 legislation, the 1973 Employment and Training Act created the Manpower Services Commission (MSC) to introduce central co-ordination and planning of national labour force policy, according to Rainbird. While the ITBs had effectively assessed training needs and carried out labour force planning in their respective industrial/ economic sectors under the 1964 Industrial Training Act, they lacked a national co-ordinating mechanism to facilitate labour mobility between sectors. Such intersectoral labour mobility is taking on new importance, due to the focus upon "cross-training" developed in Japan.

According to Bowland, training policy needs to be assimilated into the framework of national economic planning. He notes that most LDCs have national economic plans and some have general manpower plans which are incorporated into the national plan, but few LDCs have vocational training plans.

An important pre-requisite for effective HRD planning is the availability, or production, of a dictionary of occupational classifications. The most common include the U.S. Dictionary of Occupational Titles (DOT), the Canadian Classification and Dictionary of Occupations (CCDO) and the ILO International Standard Classification of Occupations (ISCO). Very few nations have produced their own classification systems, preferring to adopt one of the above. However, SENAI in Sao Paulo State of Brasil produced their own classification dictionary in the 1970s. Of course, as the nature of work changes and new occupations are "created," continuous revision of occupational classification systems is necessary.

One mechanism used to determine future needs is the manpower survey, in which enterprises over a certain size are surveyed to learn their future needs, according to skill levels. Bowland notes that manpower and skills demand forecasting at the macro or sectoral level is the "classical route for co-ordination with the labour market." He quotes Richter to indicate that such forecasts are necessary to the "taking of informed and rational decisions on

the nature and content of training programmes and projects." These surveys can be carried out at local, state/ provincial, or national levels, as well as for discrete economic/industrial sectors.

Among the problems associated with manpower surveys are how to design appropriate sampling techniques, how to gather relevant data, and how to analyse those data to generate useable forecasts and projections of future skill requirements and the "track record" of producing out-of-date manpower forecasts long after the survey data were collected. Clark noted that employers generally identify only their short term needs and those who are not involved in training have a difficult time identifying and articulating training needs. In contrast, the HRD planning process requires data indicating medium and long-term skill requirements, because planning changes and/or additions to skill training (and retraining) programmes take at least five years to implement. Kanawaty and Castro note that "traditional approaches to manpower planning are proving too simplistic to be of value given the rapid changes in demand patterns." They call for "new initiatives ... to correct the short-run mismatches between supply and demand in a systematic and continuous manner." Hultin notes that "it is difficult to forecast new technologies and their impact on employment." A considerable number of "new" occupations exist today which were unknown - and unthinkable - even a decade ago.

Among these potential "new initiatives" are attempts to computerise occupational projection systems and integrate such systems with economic forecasting. A state-of-the-art example is The Canadian Occupational Projection System (COPS), developed in the 1980s, to facilitate the availability of on-line computer data on trained manpower supply from training institutions and demand from enterprises. As an interactive system, COPS is able to generate estimates of labour supply and demand, based upon different future scenarios. COPS can also pinpoint trouble-spots where supply may not meet demand, during a 3 - 5 year projection period, enabling corrective action to be taken. In order to compensate for inadequate data on demand resulting, for example, from the long-term effects of technological change on skill requirements, COPS has the built-in capability to utilise judgmental advice and information. While COPS was originally only accessible through on-line communication with mainframe computers, it is now available on diskette for use in stand-alone - even laptop and notebook - computers.

These considerations become even more salient in the face of technologically-driven changes to skill requirements. Competition in global markets means that under-educated and under-skilled workers, who might have gained employment in a resource-based economy in the past, can no longer be assured employment unless they possess the requisite entry-level education and skills. Therefore, countries like Canada find themselves facing the twin spectre of increased unemployment of youth, who have dropped out before completing secondary education and older workers without at least a secondary school diploma, while also facing a shortage of workers with educational levels appropriate for high technology and informatics occupations. Such structural unemployment is bound to increase in the future as production shifts from primary to secondary and tertiary sectors of the economy. Kanawaty and Castro indicate that this is becoming a world-wide problem with "high levels of unemployment, coupled with labour shortages for certain occupations, on the increase in many countries. The "solution" advanced in Canada has been to design the Canadian Labour Force Development Board to co-ordinate federal, provincial and local efforts to address this (and other) problems. Other national training boards must also address both the provision of appropriate basic skill levels to new employees and the retraining of employees facing redundancy.

Internal national training board planning and implementation processes vary considerably, according to their legislative mandates and national traditions. For example, the BiBb decision-making process is, as follows:

1. When general agreement is reached on changes to various aspects of training for oc-

cupations covered by the dual system, the Minister of Economics issues a directive to the Secretary-General of BiBb, who appoints a staff member to head the project. This task leader assembles a "Committee of Experts," comprising experts in the occupation under consideration representative of the four BiBb "benches." After undertaking research and agreeing on appropriate action, their decision is forwarded to the Main Committee for information.

2. The BiBb Main Committee formulates policy and directs staff to undertake research and report back to the Main Committee. If the Main Committee achieves consensus, then the new policy is drawn up and issued. If there should be disagreement, then the Main Committee may take a majority position and allow those opposed to issue their objections in the Annual Report.

3. In some policy matters a sub-committee of the board is established along quadripartite lines. The staff undertake research commissioned by the sub-committee and formulate a position which is reported back to the Main Committee for acceptance.

4. There are informal, but generally understood, criteria that determine which process should be used for various issues. The Minister of Economics may have the legally constituted power to override these informal understandings, but to make use of that power could potentially undermine the consensual system of consultation.

Many national training boards have evolved in different ways, and in their evolution have changed their functional emphasis. For example, the National Manpower and Youth Council of the Philippines (NMYC) was established in the 1970s and placed its initial emphasis upon manpower planning. However, in the 1980s the NMYC shifted in favour of training. Accordingly, the NMYC was given the mandate to establish a national training strategy and now co-ordinates 13 regional training centres. Each region has a decentralised replica of the national council, as well as industry boards which co-ordinate training in industrial sectors. The German BiBb delegates to committees of local Chambers of Commerce the authority to decide not only which employers may provide training, but also the management of the number of available training places.

While the co-ordination of many national training boards is usually delegated to an executive committee, e.g., the BiBb Main Committee, a strong executive manager is required. BiBb is directed by its General Secretary whose term is unlimited. This, therefore, renders him independent of politics, so that he may (and often does) criticise government policies. Similarly, the Director-General of the Philippine NMYC supervises a secretariat of approximately 3,000 staff. He is considered equivalent to an Under-Secretary and has considerable stature. In contrast, the Canadian Labour Force Development Board is headed by co-chairs from business and labour, who exercise joint control over the CLFDB Secretariat.

A detailed glimpse of nine internal practical planning steps normally undertaken by training boards is provided by the former Hotel and Catering Training Board of the U.K. These steps include:

1. determination of training policy;
2. identification of training requirements;
3. organisation of training;
4. determination of the cost of training;
5. preparation of a training plan;
6. development of training programmes;
7. implementation of planned training;
8. keeping records of training;
9. reviewing, evaluating and improving training.

IX. Testing and certification

Another important function often performed by national training boards is that of trade testing and certification. However, this function is often shared with Ministries of Labour or Education, or delegated to state/provincial bodies in federal states.

In Germany, BiBb has authority to decide, together with appropriate government ministries, the content and length of training for each occupation. The Vocational Training Act of 1969 established the framework for in-plant, dual system, training. Between 1969 and 1990, the number of trade areas recognised in training ordinances has been consolidated from 600 to 378. Apprenticeships comprise 3 - 3 1/2 years, with three or four days per week in on-the-job training and one or two days in vocational and specialised schools. The training period culminates with a final examination. A Board of Examiners with equal employer and employee representation and at least one vocational school instructor, established by the Chambers of Commerce at the Land (state) level, determines the content of examinations. Generally, examinations consist of written and oral components with the addition of practical workshop tests for candidates in the trades and technical sectors.

The Singapore VITB is responsible for establishing the skill standards and certification schemes. The VITB Certification Committee, established in 1979, is an independent tri-partite national authority for the testing and certification of trade skills. The committee conducts public trade tests to ascertain the attainment of skills and awards certificates at three levels: Grade 1 for highly-skilled master craftsmen, Grade 2 for completion of apprenticeships, and Grade 3 for completion of basic vocational training. In addition, the Industrial Technician Certificate is awarded after training at the technician level. At the lowest level, Certificates of Competency are conferred after short-term training in certain trade areas.

In marked contrast, the Canadian Labour Force Development Board has no responsibility for trade testing and certification. These powers are constitutionally conferred upon the ten provinces. However, in the 1960s the Interprovincial Standards Programme (ISP) to facilitate labour mobility established the "Red Seal Trades" programme to test and certify designated critical skill trades. Twenty-eight of the 170 apprenticeable trades in Canada qualify for the ISP and approximately 70 percent of all apprentices are in Red Seal trades. Apprentices must first hold (or be qualified to hold) a provincial Certificate of Qualification to be eligible to write a Red Seal examination. The CLFDB mandate appears to extend these federal efforts by defining one of the board's roles as "the mobilization of private sector efforts to modernize and put in place standards of skills for certification of occupational competence." The board may "recommend" "standards for skills training and certification to promote access and portability."

Similarly, the British experience has been coloured by the twin traditions that education has been viewed as the responsibility of Local Education Authorities, while training was viewed as a matter for individual employers and employees, according to Rainbird. Under the 1964 Industrial Training Act, the ITB functions included the establishment of standards and, if necessary, the use of skill tests to measure achievement. Tradition has long played a central role in craft and technical testing and certification in the U.K. with employers and labour unions represented on various (private and non-governmental) examination boards. The City and Guilds of London Institute is the largest of these examining bodies, which also include the Technician Education Council, the Business Education Council, and the Royal

Society for the Encouragement of Arts, Manufactures and Commerce. The City and Guilds system has been transferred to most Commonwealth education and training milieux, although substantially altered to adapt to local conditions, since the attainment of independence by Commonwealth nations. Although training in Japan is mainly delivered by private sector enterprises (with the exception of retraining), the government has increased its public sector skill testing and certification functions.

One issue currently receiving renewed attention is that of the training, certification and licensing of trainers. Germany has long had mechanisms in place for the training and certification of trainers at the Instructor and "Meister," or Master, levels. Under the 1972 and 1984 Regulations on the Competence of Trainers (Ausbilder Eignungsverordnung), enacted for each of the 378 occupations recognised under sections 20-24 of the Berufsbildungsgesetz (Vocational Training Act - BBiG) of 1969, training and licensing examinations are set by the Chambers of Commerce and Industry for each training occupation. CEDEFOP reported that there were 786,100 trainers holding formal qualifications in 1986, of whom 354,200 were registered. In 1989, CEDEFOP reported that the ratio of registered trainers to trainees was 1:2.4. Training courses and seminars are normally of 120 hours duration, offered full-time for three weeks, or part-time over 3 - 5 months, as well as self-study and distance-delivered train-the-trainer courses. The Certificate of Aptitude and Meister examinations take place in written and oral form. Practical instruction of trainees by the candidate is included in the framework of the oral examination and the examination lasts a total of 5 1/2 hours.

In Japan, the Vocational Training College for Teachers was established in 1958 to train and certify trainers employed in national, or Prefectural (state), vocational training institutions. Licensing follows a four-year course of study at the technologist level and graduates are regarded as trained engineers and instructors. Korea appears to have replicated the Japanese approach, with its new four-year Vocational Training Instructor's University. Trainers are licensed by the Ministry of Labour under Article 41 of the Vocational Training Basic Law.

The Singapore National Productivity Board (NPB) reported in October 1991 a national strategy for the development of "a world-class trainer infrastructure" to develop skill standards for five categories of trainers. These are to extend certification mechanisms already implemented by the Institute of Technical Education (formerly the VITB) for trainers operating in companies undertaking apprenticeship and/or operating "Approved Training Centres, which comprise a course of four modules for Industry Trainers and a certification examination, related to the delivery of the NTC qualifications.

Since 1986, the United Kingdom has developed an interesting new standards-setting infrastructure with 140 "Industry Lead Bodies" established in each occupational field to set competency-based standards "which apply to performance in work" on an industry-by-industry basis. Their goal is to have standards in place for all occupations by 1992. The Training and Development Lead Body (TDLB) is charged with standards-setting in the training profession, including those for trainers, training consultants, line and HRD managers. These standards will "be used to form the basis of national vocational qualifications through the work of NCVQ and SCOTVEC" (for Scotland) to relate all training qualifications "to a common framework." The NCVQ (National Council for Vocational Qualifications) was established at the same time to "reform vocational qualifications by basing them on national standards and by creating a National Vocational Qualifications (NVQ) framework. The NCVQ efforts are designed to replace the previous "jungle" of vocational qualifications, as well as to facilitate entry to the recently-established common European standards. While not specifically designed to facilitate certification, the TDLB and NCVQ standards should make that task easier to accomplish.

South Africa has also recently developed standards for their training profession through co-operative efforts of the National Training Board and The South African Society for Training and Development (SASTD). Their approach involves development of a minimum syllabus content for the training of trainers, Accreditation Certificates for Trainers, and a system for the registration of training practitioners.

The Australian National Training Board (NTB) was established in 1990 to assist industry with the development, and endorsement, of national competency standards for occupations and classifications in industry, or enterprise, awards or agreements. Their goal is that "competency standards," established in consultation with industry, will be the benchmark for curriculum development, assessment, training delivery, accreditation and individual certification in the Australian vocational education and training system.

X. Perceptions and images of national training boards

Although this section is more "academic," and less pragmatic than the "how-to" tenor of other chapters, it is important to include the perceptions and images which researchers and other commentators have recorded about National Training Boards. This section also offers both background information and selected insights which might be useful to those charged with the development of training boards relevant to their own nations.

Andrade observed that most Latin American training boards "have been set up with the direct support of manufacturers and producers." "The fact that the private sector should have taken an active part in their creation and development ... gives them a non-governmental stamp: officialdom is a minority on their boards, education or labour ministries have little control over their activities." "They have proved to be extremely efficient, capable of training large numbers of workers at different skill levels over short periods of time." "Their efficiency was basically due to technical and administrative flexibility, to their great autonomy and ever-growing income." Boards were "able to recruit qualified technical personnel and pay them realistic salaries, apart from setting up adequate facilities and incorporating new techniques." The close contact kept by these institutions with the production sector placed them in a position to detect new training needs and respond to them without delay."

According to Ducci, "it was noteworthy" that only two of the Latin American training board structures - Argentina and Uruguay - were part of the technical education infrastructure, rather than established in the industrial and commercial sectors. She attributes this to their long-standing European immigration, "which implied for both countries a working force that was, in general, already skilled and which assumed a predominant role in the industrial activity of the nation." In addition, she noted that "scholastic levels attained by the population greatly surpassed the Latin American average." Both Argentina and Uruguay had universalised primary education and education was considered to be an instrument of social mobility and "one of the motor forces of economic development." In other words, their developmental patterns more closely resembled the industrialised countries than the LDCs. This is an important point for countries considering training board options to consider.

Ducci described the five "pioneer" Latin American national training boards (SENAI-Brasil, CNAOP [later CONET] - Argentina, SENAC - Brasil, SENA - Colombia, and INCE - Venezuela) as sharing "common characteristics" that contributed to the design of the remainder of "the vocational training institutions of the region." She indicated that "one of the characteristics which was to mark the first phase of these institutions ... was that they considered vocational training to be an undertaking of purely urban impact." This characteristic changed when SENAC, SENA and INCE undertook training in the commercial and service sectors. "Another characteristic distinguishing the first experiences in vocational training is that they were directed preeminently towards the training of workers for skilled and semi-skilled jobs." Ducci indicated that the early stages of these training systems were devoted "to palliating the deficiencies of the established schooling system, rather than alleviating the needs of the working population as a whole." An important common characteristic was their "firm resolve expressed in their founding charters to organise ... the collaboration of the State, employers and workers."

Ducci also provides her perceptions of the changed role of Latin American training

boards. resulting from their decisions to provide rural-based training. "The inclusion of the primary sector (agriculture) as a field of action for the brand new vocational training institutions of Colombia (SENA, 1957) and Venezuela (INCE, 1959) opened an as yet unexplored vein. In spite of the fact that in the Latin American countries ... the greater part of the population lived in rural areas, little attention had been paid to the training requirements of agricultural workers." These changed directions are important for many LDCs to consider in the planning of national training boards. As noted earlier, the creation of SENAR in Brazil in 1976 was influenced by the adaptation of the original SENAI model in Colombia, Costa Rica and Venezuela.

Granander provides a European social welfare perspective, indicating that "Swedish educational policy has been a natural part of the welfare policy which, during the post-war period has laid the foundation of improved living condition(s) in Sweden" and "has also governed the development and reforms vocational training during the last few decades." "The evolution of the vocational training system in Sweden has resulted in the integration of the old apprenticeship system into a revised stage of education, called the Upper Secondary School (Gymnasieskolan)," which enrols " more than 90 percent" of the relevant age cohort. "At times the vocational oriented streams of this system have become the first choice by a majority of students leaving the compulsory nine year(s) of schooling."

The perspective from organised labour on effective training boards was presented in The Canadian Labour Market and Productivity Centre study, which contributed to the establishment of the Canadian Labour Force Development Board. They noted that "in many Western European countries (e.g., Sweden, West Germany, the U.K. pre-Thatcher) labour has much greater control of the process and content of training at the workplace and industrial level (e.g., through joint training committees which often have statutory rights and responsibilities as in Germany, the former Industrial Training Boards in the United Kingdom) and/or at the regional and national level (e.g., through direct participation on regional and national labour market boards in Sweden which have significant training budgets.)"

Yet another employer-centred perspective was provided in the "America's Choice" study by the Commission on the Skills of the American Workforce. Their recommendations included:

- the establishment of a new national educational performance standard to be met by age 16;
- states should take responsibility to ensure that all youth achieve the Certificate of Initial Mastery (CIM) with new local Employment and Training Boards creating and funding alternative learning environments for those who are unable to attain the CIM in regular schools;
- creation of a comprehensive system of Technical and Professional Certificates and Associate degrees for students and adult workers who do not pursue university degrees;
- provide all employers incentives to invest in the further education and training of their workers and to pursue high productivity forms of work organisation;
- establishment of a system of Employment and Training Boards at the federal, state and local levels to organise and oversee new school-to-work transition programmes and systems.

Ducci introduced yet another perspective which has impacted upon the perceptions of national training boards: international co-operation. Prior to the creation of CINTERFOR (the Inter-American Centre for Research and Documentation on Vocational Training) in 1964 as a specialised agency of the ILO, there had been "a strong current of informal communication between the vocational training institutions of the region. Wilson described the visit of a Senator (later President) from Colombia to Brasil in 1956. Senator Betancur's visit to SENAI resulted in the secondment of Joao Batista Salles da Silva

from Sao Paulo SENAI to assist Colombia with the establishment of SENA. Ducci described the creation of CINTERFOR as the "catalysing agent of the aspirations and experiences of the vocational training institutions of America and as the generating focus of permanent flows of information and contact between them." Subsequently, the ILO assisted in the replication of CINTERFOR in Africa, with the creation of CIADFOR. In addition, CEDEFOP (European Centre for the Development of Vocational Training) was created in Europe, under the aegis of the European Commission, to carry out research, disseminate information and consult with national bodies, according to Clark.

Castro and Oliveira provide a perception of SENAI focused upon its internal operations that may be helpful in the design of national training boards. They note that "by adopting a clear, workable and simple vision of what technical learning should be, SENAI encourages its students to develop a practical knowledge of both theoretical concepts and the "hands-on" skills necessary for good performance in future jobs. This system has been able to extend its operations with acceptable uniform quality levels throughout Brazil. SENAI's use of a rigorous concept of educational technology allows instruction to be offered in a variety of ways. For example, conventional teaching occurs in small, medium and large-scale schools. There are also learning workshops linked to factories and businesses. Finally, there are some schools which operate on a system of individualised learning. This method allows a high degree of flexibility, both the for businesses and for the learners, and offers the possibility of realising appreciable savings in the cost of education."

XI. Lessons learned

The literature on reform of national training systems has provided a number of lessons applicable to the study of the effectiveness of training boards and their co-ordination functions. Budu-Smith noted several fundamental issues which must be addressed, namely:

- a national labour force training policy
- a funding mechanism to support the training system
- co-ordination between industries and training institutions
- improved economic use of training resources
- commitment to training by government, employers and labour

Adams' examination of national training policies in major OECD countries indicated initial policy emphases from the 1960s upon (1) provision of training to new labour market entrants and the unemployed; (2) equity programmes to enable the disadvantaged (women, minority groups, handicapped and immigrants) to acquire skills; (3) the achievement of price stability through training to remove skill bottlenecks and mobility barriers; and (4) promotion of economic growth through training to remove skill shortages. Subsequent economic crises have resulted in a shift in the focus of training policies from the achievement of equity to the improvement of competitiveness.

Corvalan writes that a national vocational training policy should provide a framework for the institutional organisation of training programmes. The policy should:

- define which ministry is responsible for training at the national level and the degree of autonomy of public training bodies;
- determine the basis for setting up administrative machinery at the regional and local levels and its degree of autonomy for training and for allocating local and national resources;

He further indicates that training policies should be based upon four important principles: training policy should be universal, unified, comprehensive, and provide for continuing training throughout an individual's life by complementing pre-employment training with upgrading and retraining whenever necessary.

In a recent Canadian discussion paper, the commitment to a training culture was illustrated by a listing of basic skills needed for a lifetime of learning identified by employers, including:

- the ability to learn (the most basic skill of all);
- reading, writing and computation;
- oral communication and listening skills;
- problem solving and creative thinking
- skills and values needed to achieve high self-esteem, motivation and goal-setting;
- employability and career development skills;
- interpersonal skills, teamwork and negotiation;
- understanding organisational culture and sharing leadership.

The "Learning Well ... Living Well" report also noted that "a future learning system that stresses relevant skills for all" should enable workers "throughout their lifetime, to learn new skills continually and absorb new knowledge." This requires skills to:

- apply mathematical and scientific principles in a work setting;
- adapt to, and operate comfortably in, a rapidly changing technological environment;

- continually retrain and upgrade skills;
- operate effectively in team environments, often with people of different social and cultural backgrounds;
- work effectively ... in the languages of competitor nations;
- be entrepreneurial and innovative in many areas, not only in design and research and development, but in the management of people and information.

Bowland indicated that some of the problems involved in the formulation of training policy included:

- employers do not want to be involved in training policy or delivery, but when left out of the process complain about the quantitative (skill shortages) and qualitative (inappropriateness) aspects of training;
- governments, especially in LDCs, take full responsibility for education and training, but government-controlled training is very costly and is typically met with a great deal of criticism;
- the problem, therefore, is how to involve employers in the formulation of training policy and the delivery of training;
- a related problem is how to shift the financial burden for the provision of training.

Adams identified success factors attributed to national training boards, during his interviews, as:

- the ability to make consequential decisions, including the power to:
- assess financial contributions;
- distribute training subsidies;
- designate training occupations;
- determine curricula;
- set examinations;
- establish regulations.
- the commitment and hard work of training board participants, which indicates that board members:
- must be carefully chosen;
- must have the ability to commit their constituency to action;
- must have knowledge and interest in training policy and delivery.
- having an independent secretariat and budget;
- board decisions must be accepted by and acted upon by governments.

Adams interviewees' also identified the following reasons why training boards fail, which include:

- some boards have been established for symbolic, rather than pragmatic, reasons, including pressure from funding agencies;
- some boards have ambiguous mandates and few concrete powers;
- some boards have no secretariat and no independent resources;
- other boards are not given adequate resources to properly carry out their mandates;
- some appointed board members do not know (or care about) the substance of the issues being discussed;
- some board members have no influence on their constituencies, or organisations;
- in some countries, employers' organisations and labour unions are weak and/or do not have adequate resources;
- in other countries, competition between employers' organisations and labour unions mitigates training board participation;
- some boards report to weak ministries, or ministers;
- some governments maintain tight control over education and training and are unwilling, or unable, to delegate control to training boards;
- training boards which are too centralised may lose touch with the requirements of their 'clients,' which suggests that local, or decentralised, boards can better manage training since they operate closer to the skill training market.

Hultin contributes to an understanding of factors which either cause national training

boards to fail, or not to be established, when discussing the administration of training in LDCs. He notes that since "Ministries of Education ... often pay more attention to universities and institutes of academic education than to vocational schools" so that "vocational schools administered by Ministries of Education often received less funding and support than other parts of their education system." He also notes that it has been difficult to establish training boards in LDCs because "school administrators and teachers" perceive boards as "a threat to their independence and even to their job security" and they "are not accustomed to cooperation with other parties." "Most headmasters are a part of a central hierarchy and are not accustomed to discuss curricula, teacher quality and student placements with 'outsiders' in local industry or other enterprises, not even when the latter represent the employers of their graduates. At the same time the 'outsiders' lose interest in the work of (training boards) when they find that they are met with suspicion, their advice is not welcome and their experience is not appreciated." He concludes that "in such cases" training boards "soon only exist on paper."

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